



Health Analytics and Vital Records

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Alaska Facts and Figures

Excess deaths associated with COVID-19, Alaska, January – May 2020 *(Updated 06/19/2020)*

Background

Estimates of excess deaths can provide information about the burden of mortality both directly and indirectly related to the COVID-19 pandemic. Excess deaths can be defined as the difference between the observed numbers of deaths in a specific time period and expected numbers of deaths in the same time period.ⁱ

Methods

Excess death counts and rates were estimated for all-cause deaths and selected underlying causes of death that may be related or affected by the COVID-19 pandemic. The average counts and rates of death per year were calculated for 2017 to 2019 from January to May, which represent our expected deaths. These expected counts and rates were then subtracted from the 2020 counts and rates, our observed deaths, to estimate excess deaths (Table 1). Because rates were calculated for a partial year, they cannot be compared with mortality rates that are based on deaths occurring over an entire year (annual mortality rates).

Mortality rates were calculated using Alaska Department of Labor and Workforce Development Research and Analysis Section population estimatesⁱⁱ as the denominator. The estimates for 2017-2019 used an average of the population for the 3 years; the estimates for 2020 used the population for 2019 as 2020 population counts are not yet available.

Note that 2020 deaths in general, in particular the most recent month of death counts shown, may be incomplete. The average lag between the date of death and the date the death is registered in our Electronic Vital Records System is approximately nine days. Differences between values were not tested for statistical significance.

Summary:

- Compared to average deaths from Jan to May in 2017 - 2019, all-cause mortality counts and rates appeared very similar in 2020.
- During January through May of 2020, compared to average deaths from the same time period in 2017 - 2019, mortality counts and rates appear lower for influenza and pneumonia, cancer (malignant neoplasms), assault (homicide), and all unintentional injuries, which includes motor vehicle accidents. However, death from diseases of the heart appear slightly higher.

Table 1: Excess Deaths by Cause January through May, 2017-2019 compared to 2020, Alaska Residents

	ALL CAUSES	INFLUENZA AND PNEUMONIA	DISEASES OF HEART	MALIGNANT NEOPLASMS	CHRONIC LOWER RESPIRATORY DISEASES	INTENTIONAL SELF-HARM (SUICIDE)	ASSAULT (HOMICIDE)	MOTOR VEHICLE ACCIDENTS	ALL UNINTENTIONAL INJURIES (including Motor Vehicle Accidents)
Counts	Jan-May	Jan-May	Jan-May	Jan-May	Jan-May	Jan-May	Jan-May	Jan-May	Jan-May
2017	1,809	31	333	397	81	69	31	38	170
2018	1,845	41	331	394	106	84	22	29	155
2019	1,980	33	326	441	102	90	32	39	196
Avg. 2017-19	1,878	35	330	411	96	81	28	35	174
2020 ¹	1,881	27	343	381	91	69	17	23	151
Excess Deaths (2020-Avg)	3	-8	13	-30	-5	-12	-11	-12	-23
Crude Rates per 100,000	Jan-May	Jan-May	Jan-May	Jan-May	Jan-May	Jan-May	Jan-May	Jan-May	Jan-May
Rate 2017- 2019 ²	254.5	4.8	44.9	55.9	13.1	11.0	3.9	4.8	23.7
Rate 2020 ^{1,3}	257.3	3.7	46.9	52.1	12.5	9.4	2.3*	3.2	20.7
Excess Deaths (2020-Avg)	2.8	-1.1	2.0	-3.8	-0.7	-1.6	-1.5	-1.7	-3.0

¹2020 estimates are preliminary and subject to change

²Used 2017-2019 average population for denominator for 2017-2019 average rate

³Used 2019 population for denominator for 2020

*Crude rates based on fewer than 20 events are statistically unreliable and should be used with caution.

**Crude rates based on fewer than 6 events are not reported.

NOTE: Rates are not annualized and only reflect rates for the specified time period, therefore they cannot be compared with annual mortality rates.

Statistical significance was not estimated between 2020 and 2017-2019 average estimates

Source: Alaska Division of Public Health, Vital Statistics, Mortality.

Last updated on 06/19/2020.

ⁱ https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm

ⁱⁱ <https://live.laborstats.alaska.gov/pop/>